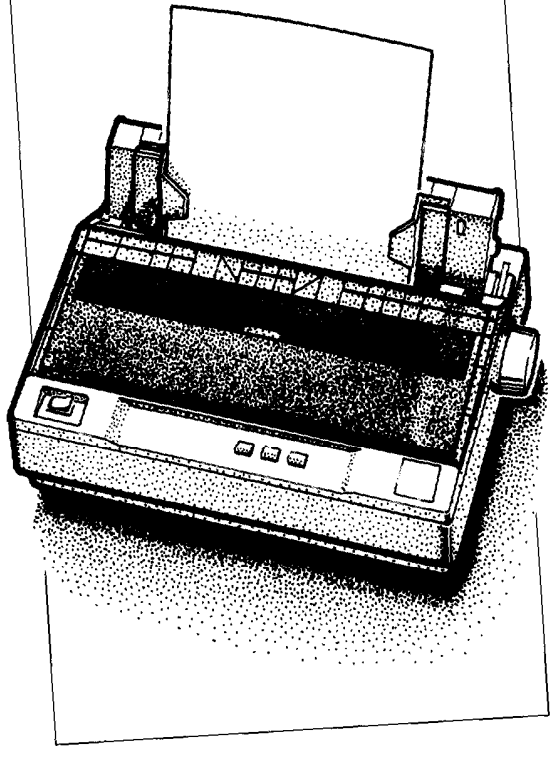
User's Guide

LQ-300



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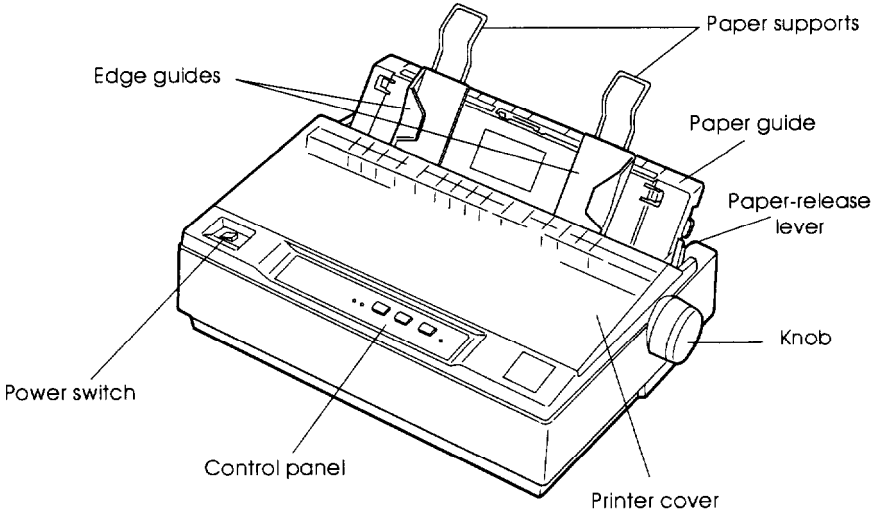
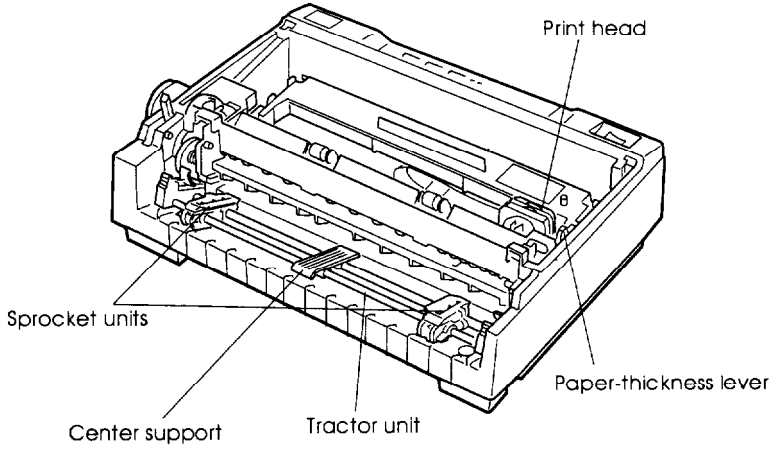
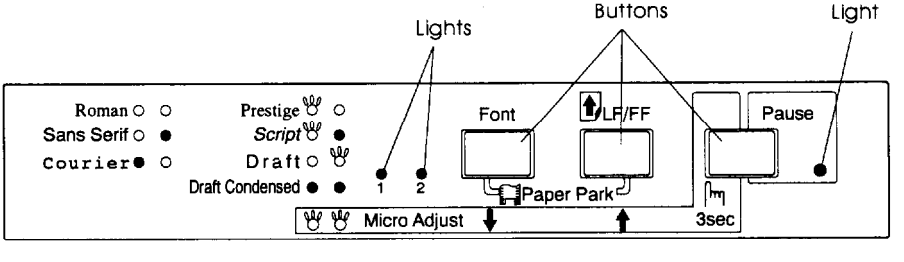

Paper supports
Edge guides
Paper guide
Paper-release lever
Knob
Power switch
Control panel
Printer cover


Print head
Sprocket units
Paper-thickness lever
Center support
Tractor unit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Micro Adjust
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User's Guide

FCC Compliance Statement

For United States Users

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❑ Reorient or relocate the receiving antenna
- ❑ Increase the separation between the equipment and receiver
- ❑ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- ❑ Consult the dealer or an experienced radio/TV technician for help.

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

For Canadian Users

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le present appareil numérique n' émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Where to Get Help for United States Users

Epson America provides local customer support and service through a nationwide network of authorized EPSON dealers and Service Centers.

Epson also provides the following support services through the EPSON Connection℠ at (800) 922-8911:

- Assistance in locating your nearest Authorized EPSON Reseller or Service Center
- Technical assistance with the installation, configuration, and operation of EPSON products
- *Sales* of the ESC/P® *Reference Manual*
- Epson technical information library fax service
- Product literature withtechnical specifications on our current and new products
- Sales of ribbons, supplies, parts, documentation, and accessories for your EPSON product
- Customer Relations

CompuServe@ on-line support

The fastest way to access helpful tips, specifications, drivers, application notes, and bulletins is through the Epson America Forum on CompuServe.

If you are not currently a member of CompuServe, you are eligible for a free introductory membership as an owner of an EPSON product. This membership entitles you to:

- An introductory $15 credit on CompuServe
- Your own user ID and password
- A complimentary subscription to *CompuServe Magazine,* CompuServe's monthly publication

To take advantage of this offer, call (800) 848-8199 in the United States and Canada and ask for representative #529. In other countries, call (614) 529-1611 or your local CompuServe access number.

If you are already a CompuServe member, simply type GO EPSON at the menu prompt to reach the Epson America Forum.

For United Kingdom Users

Epson product guarantee

Under the law, goods sold must comply with their description and must be of merchantable quality and fit for their purpose or correspond with any sample.

This guarantee does not affect the seller's legal obligation or the rights of the consumer in the "consumer transactions" under any Statute, including Sections 12 to 15 of the Sales of Goods Act, 1979.

All EPSON Products, other than OEM products, are fully guaranteed against faulty operation or performance for a period of ONE YEAR from date of purchase by the user of the product.

All claims under this guarantee MUST be supported by evidence of purchase, normally the bill of sale invoice, and it is the responsibility of the claimant to furnish such proof. Epson (UK) Limited does not issue or operate any form of guarantee registration card.

Claims are made by the user returning the product to the supplier from whom it was purchased or, if this is impractical, to any Epson supplier who also handles the same product. In the event of any difficulty, users are requested to contact the Service Co-ordinator Manager at Epson (UK) Limited.

Epson (UK) Limited, or Epson Appointed Distributors, will at their discretion repair or replace part or all of the product to provide, in their judgement, a satisfactory performance of the product consistent with its age and apparent usage.

This guarantee covers the cost of both the parts and labour required to correct any malfunction of the equipment, but specifically excludes: wear and tear, consumables, physical damage due to incorrect use or misuse and damage or faulty operation due to unauthorized and inexpert repair.

The guarantee is restricted to the performance of the product alone, and Epson (UK) Limited does not accept responsibility for any consequential loss or damage, nor claimed or implied performance, when the product is used in any combination with other equipment or program software.

Product guarantee may be invalidated as a result of excessive or inappropriate use, use in an adverse environment or in conditions outside the specifications or if the product has been subjected to unapproved modifications.

The guarantee does not cover visits to the user's premises or the repair or commissioning of the product on site.

Use of options

Epson (UK) Limited shall not be liable against any damages or problems arising from the use of any options or consumable products other than those designated as Original EPSON Products or EPSON Approved Products by Epson (UK) Limited.

Safety information

Warning:

This appliance must be earthed. Refer to rating plate for voltage and check that the appliance voltage corresponds to the supply voltage.

Important:

The wires in the mains lead fitted to this appliance are coloured in accordance with the following code:

Green and yellow-Earth
Blue-Neutral
Brown-Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The green and yellow wire must be connected to the terminal in the plug which is marked with the letter E or with the earth symbol (⏚) or coloured green or green and yellow.
- The blue wire must be connected to the terminal in the plug marked with the letter N or coloured black.

- The brown wire must be connected to the terminal in the plug marked with the letter L or coloured white.

If damage occurs to the plug, replace the cord set or consult a qualified electrician.

Replace fuses only with a fuse of the correct size and rating.

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Introduction

Features

Your EPSON® 24-pin dot matrix printer offers these outstanding features:

- High-speed printing. Print up to 200 characters per second (cps) in 10-cpi draft mode.
- Quiet operation. You'll notice the benefit of quiet printing in your work environment.
- Simple control panel. Three buttons and three lights give you fingertip-access to most printer functions.
- Two built-in interfaces: parallel and EIA-232D serial.
- Detachable tractor unit that can be used as either a pull tractor or a push tractor. Print on single sheets without removing the continuous paper supply.
- Compact design. This printer fits neatly into available space in your home or office.

  Longer printable area. Print up to 66 lines on A4-size or 62 lines on standard letter paper.

You can get custom results with the following options:

- Color Upgrade Kit (C83211*) adds visual interest to printed documents with a color ribbon cartridge.
- Pull Tractor Unit (CS0030*) for printing continuous paper and multi-part forms (used with the standard tractor).
- Single-bin Cut-Sheet Feeder (C80637*) loads up to 50 sheets of paper automatically.

Energy Star *Compliant*

This printer complies with the U.S. Environmental Protection Agency's Energy Star program, which promotes the manufacture of energy-efficient printers, computers, and monitors.

The EPA estimates that if all desktop computers, printers, and other peripheral devices met Energy Star standards, energy cost savings would exceed $1 billion annually and carbon dioxide emissions would be reduced by 20 million tons.

The Energy Star emblem does not represent EPA endorsement of any product or service.

Finding Your Way *Around*

This manual provides fully illustrated, step-by-step instructions for setting up and operating your printer.

- ❑ Chapter 1 describes how to unpack, set up, test, and connect the printer to your computer. Be sure to read this chapter first.
- ❑ Chapter 2 includes information on how to get the printing results you want and how to install options.
- ❑ Chapter 3 offers simple tips on solving printing problems. If printing results are not what you expect or the printer does not work properly, turn here for help.
- ❑ The Appendix covers the printer's specifications and lists programming commands.
- ❑ An index at the back of the manual helps you find information on specific topics quickly.

Warnings, Cautions, and Notes

Warnings must be followed carefully to avoid bodily injury.

Cautions must be observed to avoid damage to your equipment.

Notes contain important information and useful tips on the operation. of your printer.

Important Safety *Instructions*

Read all of these instructions before you set up your printer.

- ❑ Follow all warnings and instructions marked on the printer.
- ❑ Unplug the printer from the wall outlet before you clean it, and use a damp cloth for cleaning, not liquid or aerosol cleaners.
- ❑ Do not use your printer near water or spill any liquid on it.
- ❑ Do not place the printer on an unstable cart, stand, table, or other surface that may allow the printer to fall.
- ❑ Do not block any slots or openings in the cabinet. These are provided for the ventilation necessary to ensure reliable operation and protection from overheating. Placing the printer on a bed, sofa, rug, or other similar surface may block the openings. Also, do not place the printer in a built-in installation unless proper ventilation is provided.
- ❑ Never place the printer near or over a radiator or heat register.
- ❑ Use the type of power source indicated on the label. If you are not sure of the type of power available, consult your dealer or local power company.
- ❑ This printer may be equipped with a plug having a third (grounding) pin, which fits only into a grounding-type outlet. This is a safety feature. If you are unable to insert the plug into the outlet, have an electrician replace your obsolete outlet, Do not defeat the purpose of the grounding-type plug.
- ❑ Do not put your printer where the cord will be walked on.

- If you use an extension cord, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord's ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.

- Never push objects of any kind into your printer because they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock.

- Except as specifically explained in the user's manual, do not attempt to repair the printer yourself. This could expose you to dangerous voltage points or other risks. Refer all servicing in those compartments to service personnel.

- Unplug the printer from the wall outlet and have it repaired by a qualified service person under the following conditions:

  When the power cord *or* plug is damaged or frayed

  If liquid has been spilled into it

  If it has been exposed to rain or water

  If it does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the printer to normal operation.

  If it has been dropped or the cabinet has been damaged

  If it exhibits a distinct change in performance, indicating a need for service

Chapter 1
Setting Up the Printer

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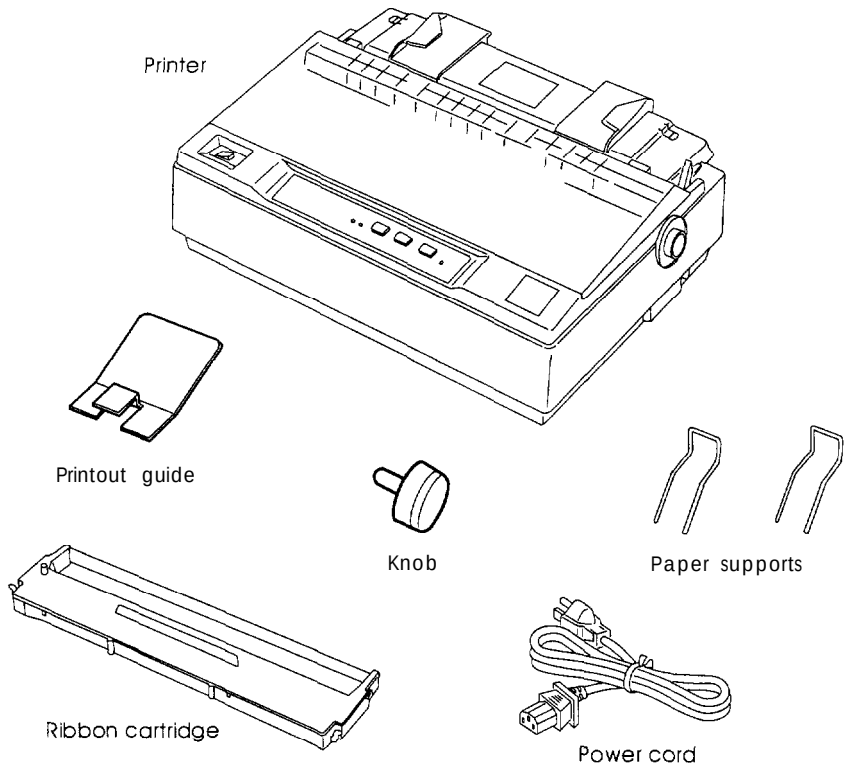
Unpacking the Printer

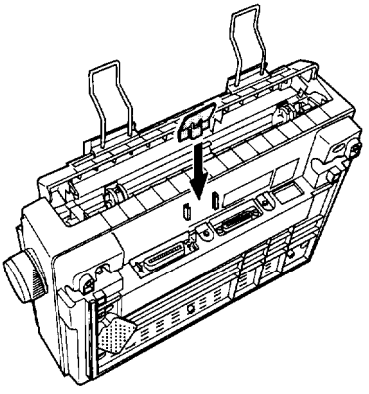
Your printer box should include these items.



In some locations, the power cord is attached to the printer.

Caution:
There are several versions of this printer designed for different voltages, and it is not possible to change the voltage. If the label on the bottom of the printer does not show the correct voltage for your country, contact your dealer.

Note:
The printout guide is used with the optional cut-sheet feeder. If you do not have the cut-sheet feeder now, store the printout guide at the back of the printer cover in case you need it later.



Choosing a Place for the Printer

When selecting a place to set up your printer, choose a convenient location that provides the following:

- ❑ A flat, stable surface
- ❑ Adequate room around the printer to allow easy operation and maintenance. Make sure it's close enough to the computer for the printer cable to reach, and be sure you can easily unplug the power cord.
- ❑ Moderate environmental conditions. Select a cool, dry area and protect your printer from direct sunlight, excessive heat, moisture, or dust.
- ❑ Appropriate power source. Make sure you use a grounded outlet; do not use an adapter plug. Avoid electrical outlets controlled by timers or wall switches; an interruption in power can wipe out the information in your computer or printer memory.

If you place the printer on a stand, follow these guidelines:

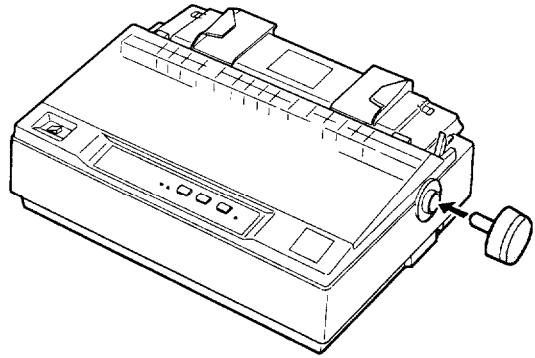
- ❑ Use a stand that supports at least 9 kg (19 lb).
- ❑ Never use a stand that tilts the printer. Always keep it level.
- ❑ Provide enough clearance below the stand and between the legs of the stand so your continuous paper flows smoothly.
- ❑ Place cables so they do not interfere with paper feeding; secure them to a leg of the stand if possible.

Assembling the Printer

Follow the steps in this section to get your printer up and running.

Installing the knob

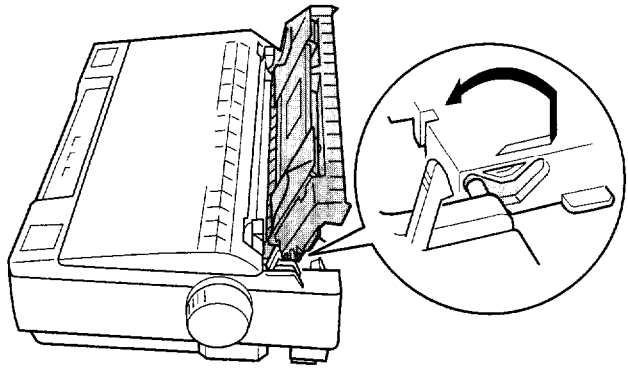
1. Insert the knob into the hole in the printer's right side and rotate it slowly until it slips onto the shaft.



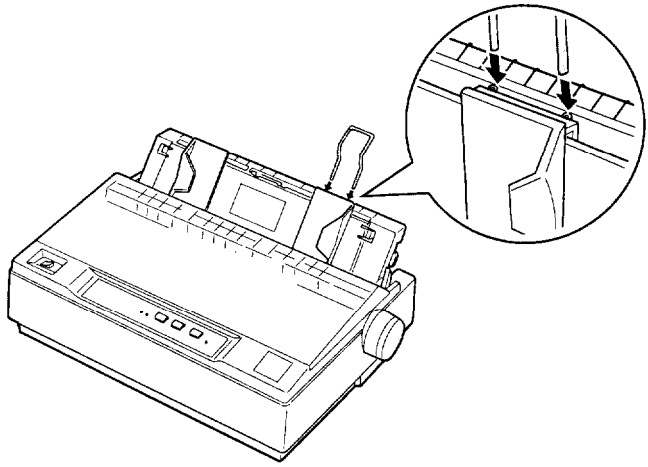
2. Push firmly on the knob until it fits against the printer case.

Attaching the paper supports

1. Raise the paper guide.



2. Hold one of the wire paper supports and push the tips into the notches on the edge guide

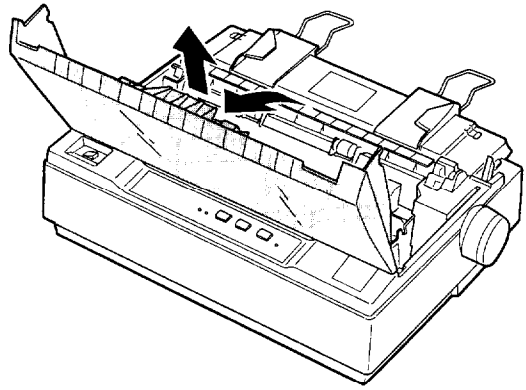


3. Repeat for the other paper support. Lower the paper guide.

Installing the ribbon cartridge

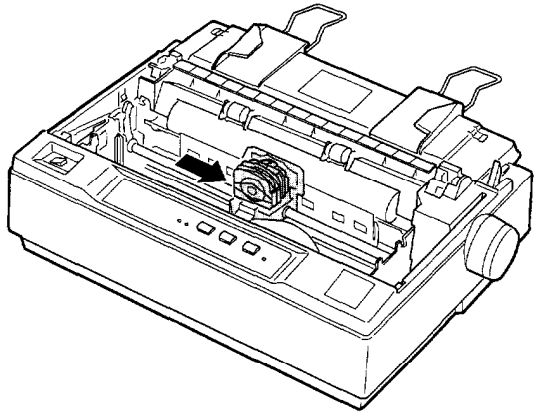
Before installing the ribbon cartridge, make sure the printer is turned off.

1. Open the printer cover to the upright position, then pull it up to remove it.

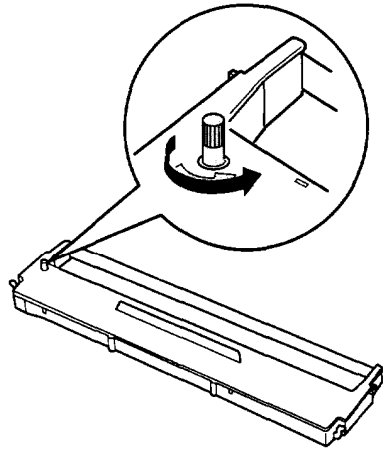


Warning:
Never move the print head while the printer is turned on; this can damage the printer. Also, if you have just used the printer, let the print head cool for a few minutes before you touch it.

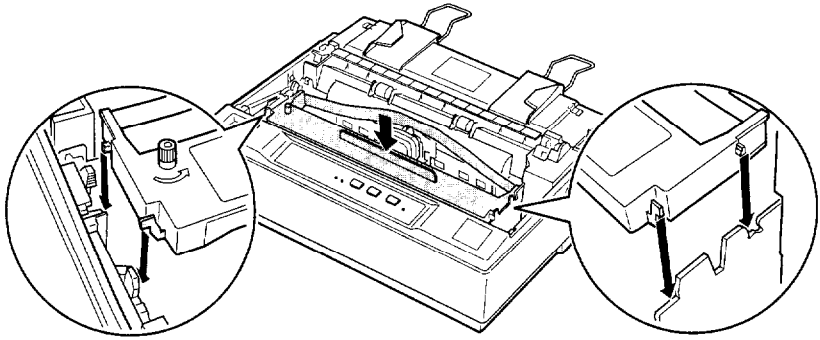
2. Slide the print head to the middle of the printer.



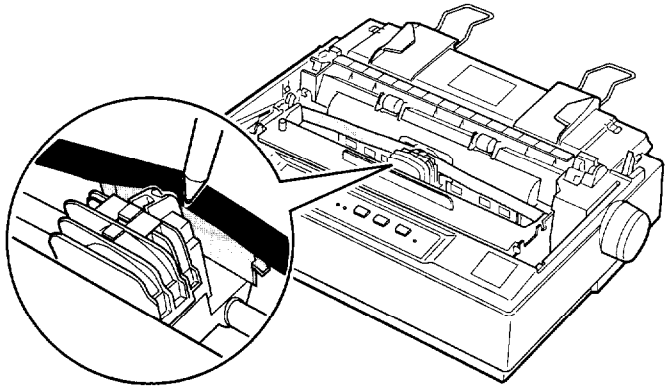
3. Turn the ribbon-tightening knob in the direction of the arrow to remove any slack from the ribbon so it is easier to install.



4. Insert the ribbon cartridge into the printer as shown; then press both sides of the cartridge down firmly to fit the plastic hooks into the printer slots.



5. Use a pointed object, such as a ball point pen, to guide the ribbon between the print head and ribbon guide. Turn the ribbon-tightening knob to help feed the ribbon into place; it should not be twisted or creased.



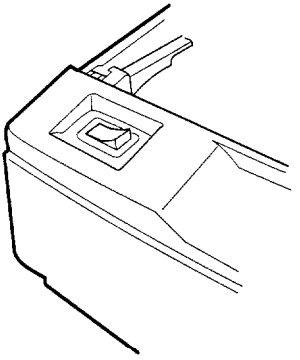
6. Slide the print head from side to side to make sure it moves smoothly.

7. Reinstall and close the printer cover.

When your printing becomes faint, you need to replace the ribbon cartridge. To remove the old ribbon cartridge, first move the print head to the center of the printer. Then grasp the ribbon cartridge handle on either side and lift it out of the printer.

Plugging in the printer

1. Make sure the power switch on the printer is turned off. It is off when the O side of the switch is pressed down.



2. Check the label on the bottom of the printer to make sure the voltage required by the printer matches that of your electrical outlet.

   Caution:
   If the rated voltage and outlet voltage do not match, contact your dealer for assistance. Do not plug in the power cord.

3. If the power cord is not attached to the printer, connect it to the AC inlet on the printer.

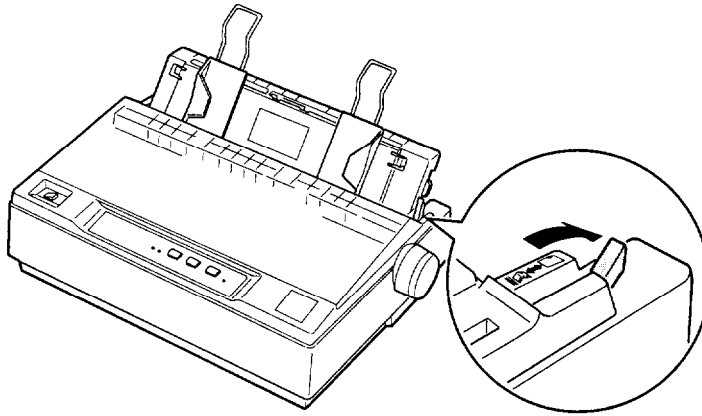
4. Plug the power cord into a properly grounded electrical outlet.

Running the Self Test

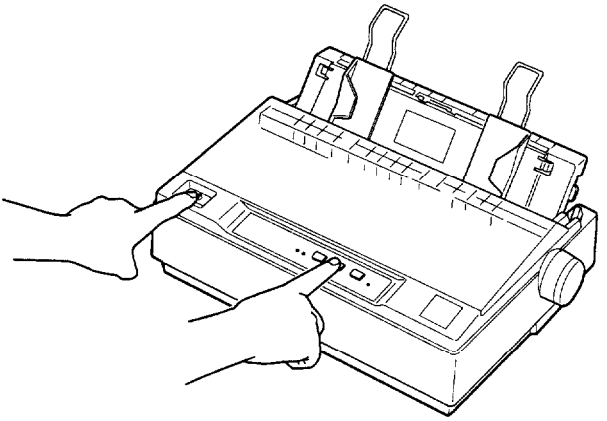
The built-in self test function demonstrates that the printer is working properly. You can run the test with either continuous paper or single sheets; this section describes the easier way, with single sheets.

Caution:
You should use paper at least 210 mm (8.3 inches) wide to run the self test; otherwise, the print *head prints directly* on the platen.

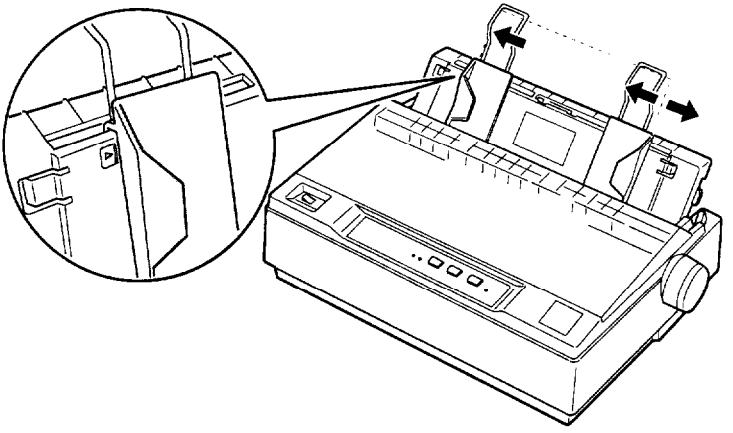
1. Make sure the printer is turned off and the paper-release lever is pushed back to the single-sheet position. Raise the paper guide upright.



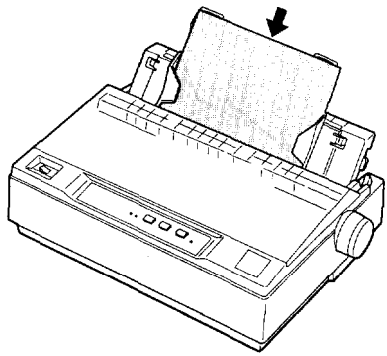
2. While holding down the LF/FF button, turn on the printer. Release the button after the Pause light flashes. The beeper sounds three times, indicating the printer is out of paper.



3. Slide the left edge guide until it locks in place at the triangular guide mark. Next, adjust the right edge guide to match the width of your paper.



4. Slide a sheet of paper down firmly between the edge guides until it meets resistance. The printer loads the sheet and begins printing automatically.



Caution:
Always close the printer cover while the printer is printing. The printer cover helps the paper feed properly.

5. To stop printing temporarily, press the Pause button.

6. *To* end the self test, make sure the printer is not printing. Press LF/FF to eject the sheet; then turn off the printer.

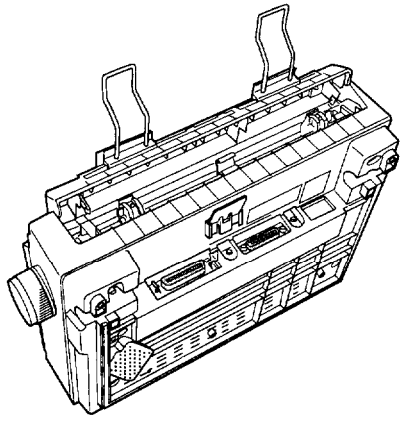
Here is part of a typical self-test printout:

```
<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_'abcd
=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_'abcde
>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_'abcdef
?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_'abcdefg
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_'abcdefgh
ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_'abcdefghi
BCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_'abcdefghij
```

Notes
If *the self test did not print satisfactorily, see Chapter 3. If it* prints *correctly, go on to the next section.*

Connecting the Printer to Your Computer

Your printer includes both a Centronics®-compatible parallel interface and an EIA-232D serial interface. Before you begin, place the printer upright, as shown below. (This makes it easier to connect the cable.)



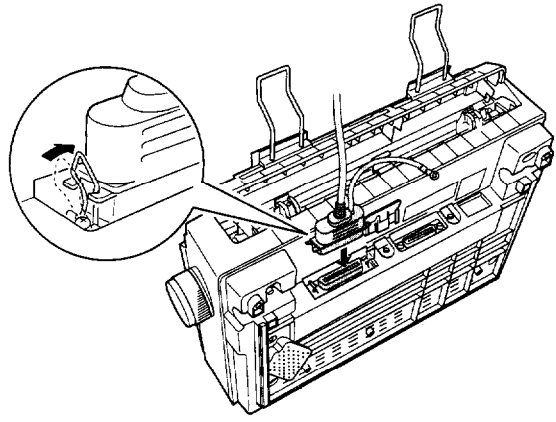
Connect your computer to the desired interface as described below.

You can connect cables to both interfaces; the printer switches automatically to the appropriate interface when it receives data.

Connecting to the parallel interface

You need a shielded, twisted-pair cable (not longer than 2 meters-6 feet) to use the parallel interface.

1. Turn off both the computer and the printer. Plug the parallel cable connector securely into the printer's parallel interface. Squeeze the wire clips together until they lock in place on either side of the connector.



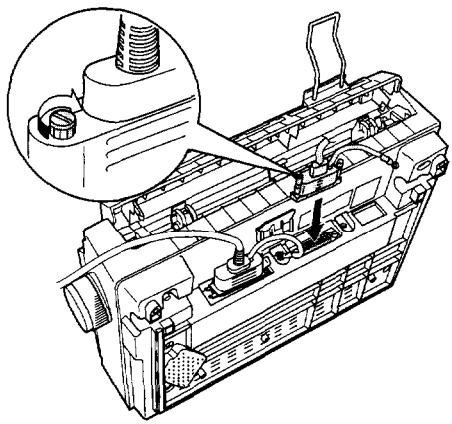
2. Guide the interface cable through the slot on the side of the printer as shown in the illustration on page 1-16 so that it does not block the paper supply.

Note:
If there is ground wire at the end of the cable, attach it to the ground connector to the right of the interface as shown in the illustration on page 1-15.

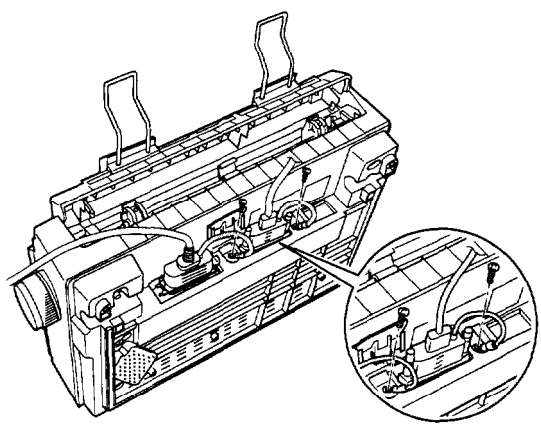
3. Plug the other end of the cable into the computer's parallel interface. (If there is a ground wire at the end of the cable, attach it to the ground connector at the back of the computer.)

Connecting to the serial interface

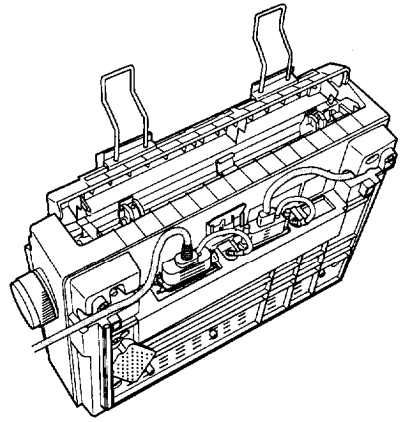
1. Turn off both the computer and the printer. Plug the serial cable connector securely into the printer's serial interface. Tighten the screws on either side of the connector.



Note:
If there is a ground wire at the end of the cable, attach it to the ground connector to the right of the interface.



2. Guide the interface cable through the slot on the side of the printer so that it does not block the paper supply.



3. Plug the other end of the cable into the computer's serial interface; then tighten the screws on either side of the connector. (If there is a ground wire at the end of the cable, attach it to the ground connector at the back of the computer.)

4. Use the Printer Setting mode to change the baud rate, parity bit, data length, or ETX/ACK handshaking if necessary. See "Changing the Printer Settings" in Chapter 2.

Setting Up Your Software

Most software lets you specify the type of printer you use so that you can take full advantage of the printer's features. Your software probably provides an installation or setup section that includes a list of printers.

Microsoft® Windows™ 3.1 and all windows programs

If Windows is installed on your computer system, follow the steps below to install the right driver for your printer. Your printer will work correctly for all your Windows programs, such as Word for Windows, Lotus® 1-2-3' for Windows, and CorelDRAW®.

If Windows is not already installed on your system, run the Windows setup program as described in the documentation that comes with the program. Follow steps 4 through 10 below when you reach the section about choosing a printer.

1. In the Main window, double click the Control Panel icon.

2. Double click the Printers icon.

3. Choose the Add>> button.

4. From the list of printers box, select LQ-300. If neither printer is available, choose the first available printer from the following list. If you plan to use color, you must choose either ActionPrinter 3260, LQ-150, LQ-860, or LQ-2550. The other printers cannot use color.

ActionPrinter™ 3260	LQ-870
LQ-150	ActionPrinter 3250
LQ-860	Any LQ printer
LQ-2550	EPSON printer
LQ-570+	
Stylus ™800	

5. Choose the Install button. A dialog box may instruct you to insert a diskette. (If necessary, insert the diskette required.)

6. Choose the Setup button.

7. Select the appropriate resolution.

8. If you selected the LQ-860, LQ-2550, LQ-570+, or LQ-870 printer, select Sheet Feeder - Bin 1 as the Paper Source. This step is very important for proper page breaks in your documents.

9. Choose the OK button.

10. Highlight EPSON LQ-300 (or the printer you added) and click the button labeled Set As Default Printer.

11. Click the Close button.

Using non- Windows software

From the list of printers box, choose LQ-300. If neither printer is available, choose the first available printer from the following list. If you plan to use color, you must choose either ActionPrinter 3260, LQ-150, LQ-860, or LQ-2550. The other printers cannot use color.

ActionPrinter 3260	LQ-870
LQ-150	ActionPrinter 3250
LQ-860	Any LQ printer
LQ-2550	EPSON printer
LQ-570+	
Stylus 800	

If your software does not list the LQ-300, you may want to contact the software manufacturer for an update.

Chapter 2
Using the Printer

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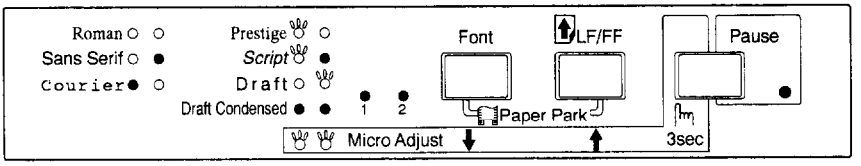
Using the Control Panel



You can control simple printer operationssuch as line feeding, form feeding, loading and ejecting paper, and selecting fontswith the buttons on the control panel. The control panel lights show the printer's status and the current font.

Lights and buttons

Pause light

The orange Pause light is on when the printer stops printing. Each time you turn on the printer, the light flashes briefly.

When the printer is out of paper, the light flashes and the beeper sounds three times. The light also flashes when you can tear off the last sheet of continuous paper at the edge of the printer cover.

The Pause light goes on and the beeper sounds if an error occurs.

Font 1 and Font 2 lights

The green Font lights, 1 and 2, indicate the current font setting. For more about selecting fonts, see page 2-4.

While in the micro adjust mode, the Font lights flash. See "Adjusting the loading position" on page 2-5.

Font button

Press the Font button during normal operation to cycle through the printer fonts listed on the control panel. When you press the button, the Font lights change to indicate your current selection. For more about choosing a font, see page 2-4.

If you hold down the Font button while you turn on the printer, you enter the Printer Setting mode, where you can change many of the printer's settings. For more about printer settings, see page 2-22.

LF/FF button

During normal operation, you can press this button briefly to feed paper line by line. Hold it down to load a single sheet, or to advance continuous paper to the next top-of-form position. You can also press LF/FF to eject a page.

If you want to make sure the printer is working correctly, you can also use this button to run the self test. To start the self test, hold down the LF/FF button while you turn on the printer. For complete instructions, see page 1-10.

Pause button

Press the Pause button to stop the printer temporarily during printing or the self test. Press it again to resume activity.

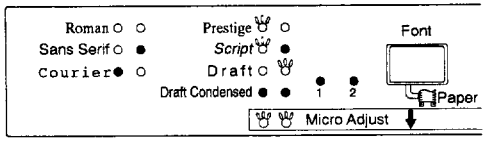
Paper Park

Press the Font and LF/FF buttons together to feed continuous paper backward to the paper-park position. See "Printing in the push tractor position" on page 2-8.

Micro Adjust

While in this mode, you can adjust the loading position by pressing the LF/FF button or the Font button. See "Adjusting the loading position" on page 2-5.

Selecting fonts



To choose one of the seven internal fonts listed on the control panel, press the Font button. The two font lights come on (0), go off (•), or flash (0) to show the current selection. Press the button repeatedly to cycle through all of the available selections; stop when you reach the desired font.

Your selection stays in effect until you change it again or turn off the printer. However, any font choices you make with your software will cancel your control panel selection. The table below shows how the Font lights appear for each selection.

Font	Font lights 1	2	Sample
EPSON Roman	○	○	ABCDEfghi0123456789
EPSON Sans Serif	○	●	ABCDEfghi0123456789
EPSON Courier	●	○	ABCDEfghi0123456789
EPSON Prestige	☼	○	ABCDEfghi0123456789
EPSON Script	☼	●	ABCDEfghi0123456789
EPSON Draft	○	☼	ABCDEfghi0123456789
Draft condensed	●	●	ABCDEfghi0123456789

○ = on, • = off, ☼ = flashing

Printing on Single Sheets

You can use the paper guide to print on single sheets with a width of 182 mm (7.2 inches) to 257 mm (10.1 inches).

Note:
You can install an optional cut-sheet feeder to load up to 50 sheets automatically. See page 2-29 for details.

Loading single sheets

You load single sheets as shown in "Running the Self Test" in Chapter 1. For normal use, turn on the printer without pressing any other buttons. The Pause light flashes briefly, and the printer loads the sheet automatically. When the printer receives data, it begins to print.

Note:
Do not use the knob to ,feed paper; otherwise the loading position may be altered from *the next page.*

Adjusting the loading position

If you want to adjust the position where printing begins on the page, follow these steps (these instructions also work when you use the pull or push tractor):

1. With paper loaded, hold down the Pause button until the printer beeps once and the Font lights begin to flash.

2. Press the LF/FF button to feed the paper forward, or press the Font button to feed the paper backward. (Press either button as many times as necessary until you reach the desired position.)

3. To complete the adjustment, press the Pause button or send data from your computer.

Getting the *results you expect*

When you print on single sheets, you may notice that the printer prints the first page of your file correctly, but then prints too low on the next page, or that it prints the last few lines from one page onto the next. This happens because single sheet handling differs slightly from continuous paper handling.

It's easy to adjust the printer so that you get the right results. Simply change the settings in your software program as described below.

1. When you install a software program, it normally asks you what printer you are using. Make sure you choose the correct printer. See Chapter 1 for instructions.

2. Many programs have an option that you can use to set the maximum lines per page. If you are using standard 8 1/2 x 11-inch paper, set the lines per page to 61.

   Note:
   To find the right lines-per-page setting for paper other than 8 1/2 x 11, create a test document using your software program. Set your top and bottom margins to 0 and then create a file of numbered lines from 1 to 66. When you print your file, notice the last number printed on the first page. This is your maximum lines-per-page setting.

3. If your program does not have a lines-per-page setting, try decreasing the top margin or increasing the bottom margin, or both, until you get the results you want.

4. You can also try adjusting the form length setting. For a standard 8 1/2 x 11-inch page, try setting the form length to 10 inches.

5. Some programs let you indicate whether you are using single sheets or continuous paper. Make sure you choose single sheets.

Printing on Continuous Paper

Your printer can handle continuous paper with a width of 101 mm (4.0 inches) to 254 mm (10.0 inches). Depending on where you position the tractor, you can use it as a pull tractor or a push tractor. These guidelines can help you decide where to position the tractor:

- ❑ Do you want to switch between printing on single sheets and continuous paper without removing the paper supply? Will you tear off continuous paper sheet-by-sheet? If yes, use the tractor in the push tractor position. (The printer comes with the tractor installed in this position.) See the following section.

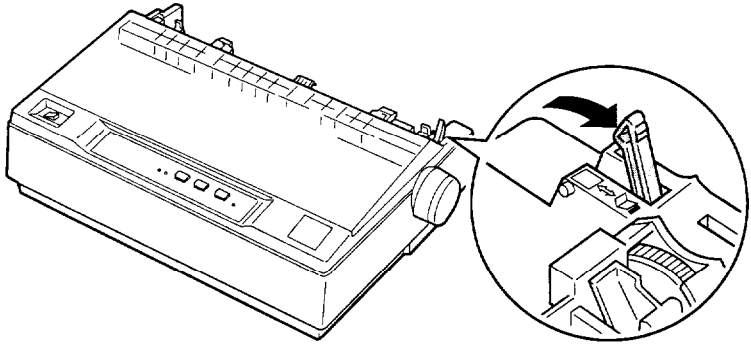
- ❑ Are you printing on labels? If yes, use the tractor as a pull tractor. See page 2-13 for instructions.

- ❑ If your documents require a more precise print position, use the optional pull tractor (C80030*) in addition to the built-in tractor in the push tractor position. For details, see page 2-33.

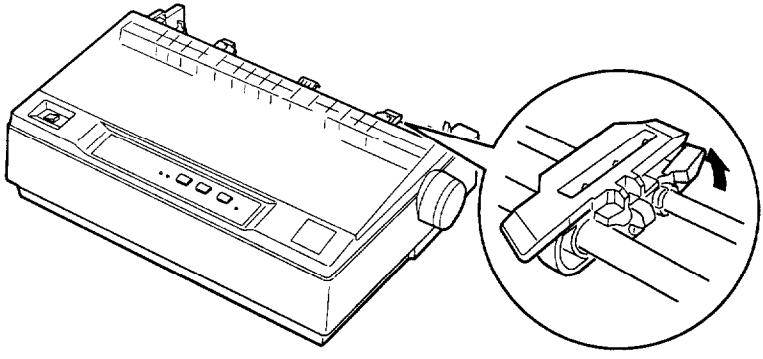
Printing in the push tractor position

When using the push tractor, it is a good idea to set the auto tear off feature in the Printer Setting mode to On. See "Changing the printer settings" on page 2-25. Here's how to load continuous paper using the push tractor:

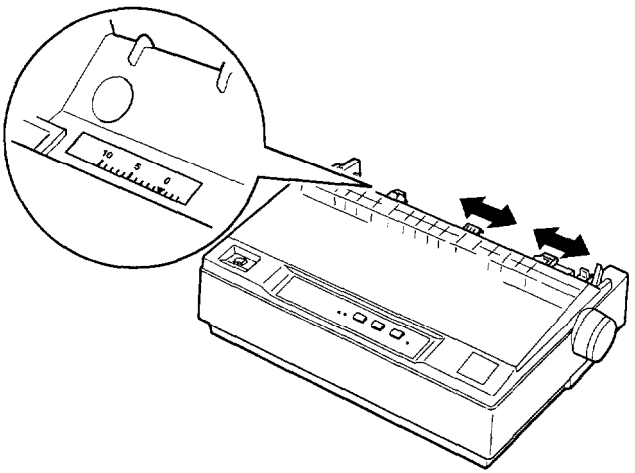
1. Make sure the printer is turned off. Remove the paper guide and place the paper-release lever in the continuous paper position.



2. Release the sprocket units by pulling the sprocket locks forward.



3. Slide the left sprocket unit using the scale on the printer as a guide. The printer prints to the right of the position marked 0. Push the sprocket lock lever back to lock it in place. Then slide the right sprocket unit to match the width of your paper, but do not lock it. Move the paper support so it is midway between the sprocket units.

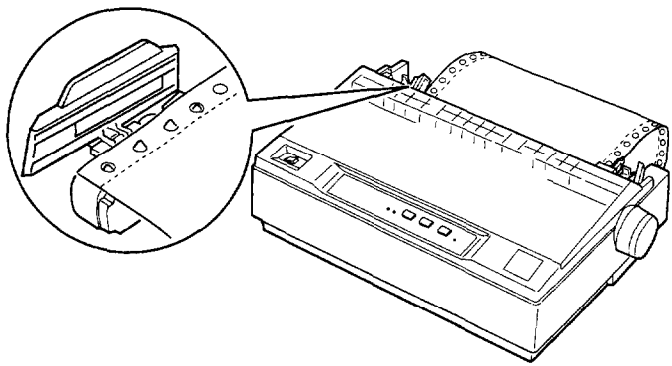


4. Make sure your paper has a clean, straight leading edge. Open the sprocket covers. Fit the first holes of the paper over the sprocket pins and then close the sprocket covers. Slide the right sprocket unit to remove any slack in the paper and lock it in place. Now the paper is in the paper-park position.

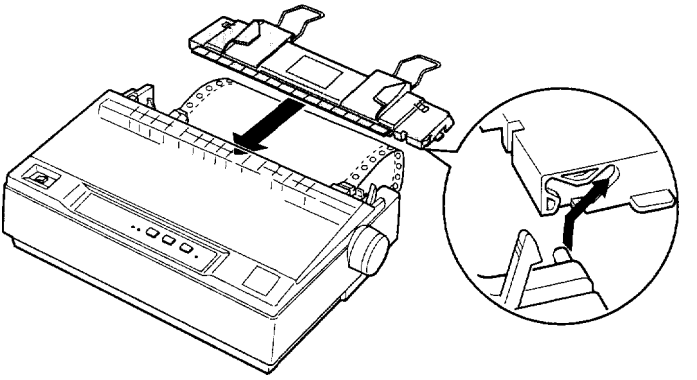
Note

Do not use the knob to feed paper; Otherwise the top-of-form position may be altered from the next page.

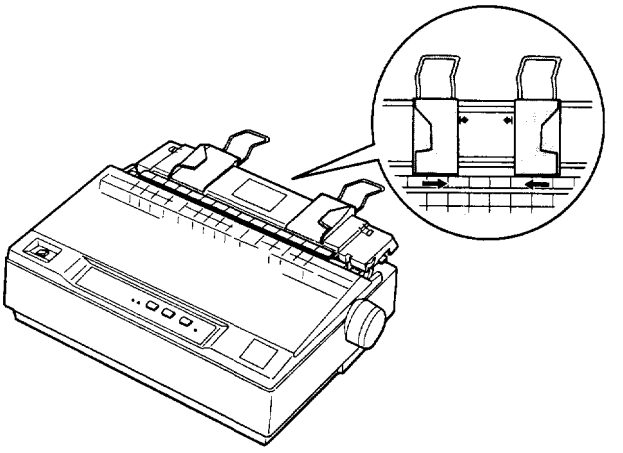
Make sure your paper supply is positioned within 1 meter (3 feet) of the printer.



5. To separate the incoming paper from the printed paper, attach the paper guide by holding it horizontally and fitting its notches over the printer's mounting posts as shown below. Then slide the paper guide toward the front of the printer until you feel it click.



6. Slide the left edge guide to the center until it stops at the diamond-shaped guide mark. Then slide the right edge guide to the opposite guide mark.



7. Make sure the printer cover is closed. Then turn on the printer. When the printer receives data, it begins printing automatically.

8. When you finish printing (the printer receives no data for three seconds) the printer feeds the perforation of the continuous paper to the edge of the printer cover so that you can tear off the last sheet. The Pause light flashes.

Note:

- *Set the auto tear off feature in the Printer Setting mode to on. Otherwise, the printer does not feed the perforation to the edge of the printcr cover.*

- *If the perforation and the edge of the printer cover do not match, adjust the paper position by following the steps in "Adjusting the loading position," while the* Pause *light is flashing.*

When you send more data, the paper automatically feeds back to the loading position. If you want to change the position where printing begins on the page, follow the steps on page 2-5 to adjust the loading position.

Switching back to single sheets

To switch to single sheets, press the Font and LF/FF buttons at the same time; the printer feeds the paper backward into the paper-park position. Then follow the steps in "Loading single sheets" on page 2-5.

Caution:
Always tear off paper before back-feeding; back-feeding too many sheets can cause a paper jam.

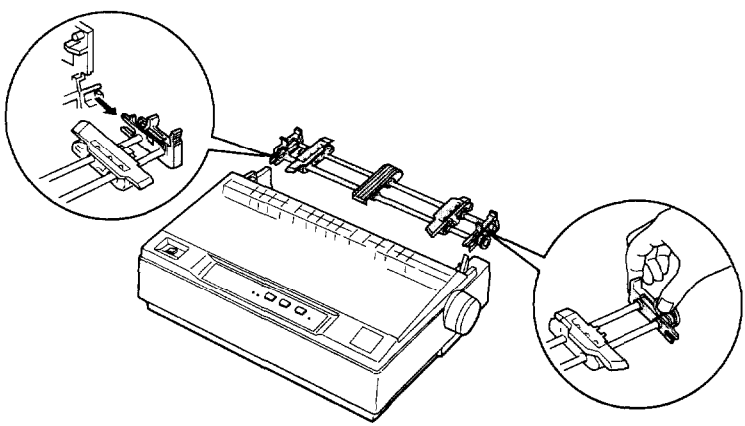
Printing in the pull tractor position

To load continuous paper using the pull tractor, you must move the tractor to the pull tractor position, as described in steps 1 through 3 below. If your tractor is already installed in this position, make sure the printer is off and skip to step 5.

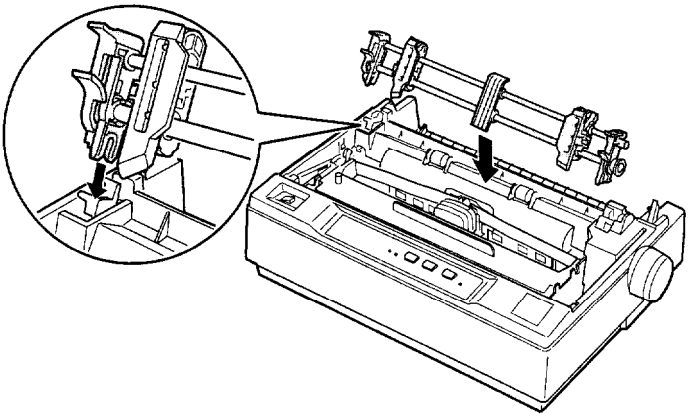
Caution:
When using the pull tractor, set the auto tear Off feature in the Printer Setting mode to off; otherwise the paper may jam.

1. Turn the printer off; then remove the paper guide. Pull the paper-release lever forward to the continuous paper position as shown in the illustration on page 2-8.

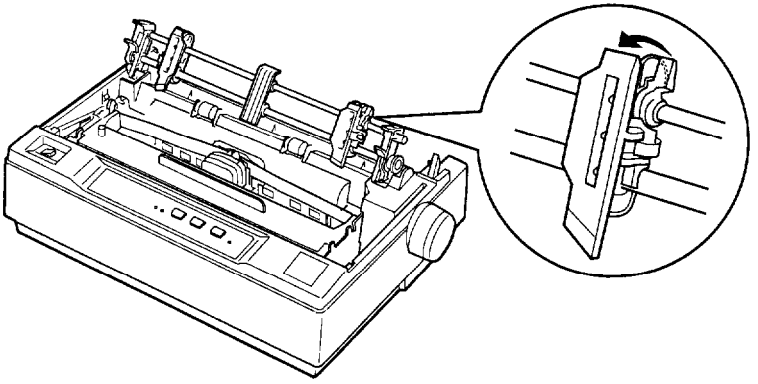
2. Squeeze the tractor's lock tabs gently and pull the tractor away from the printer. Remove the printer cover.



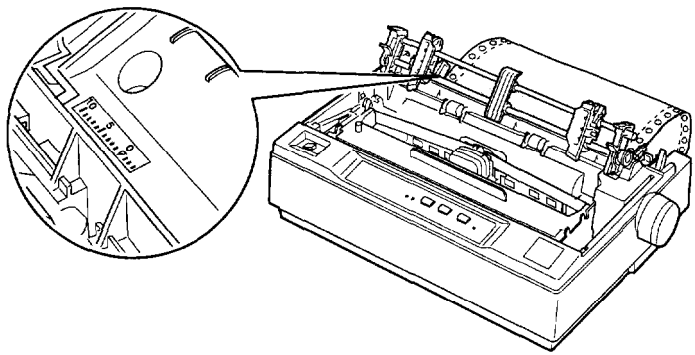
3. Lift the tractor forward to the mounting slot at the top of the printer and tilt it into place as shown below. Then push the tractor onto the posts until the notches snap into place.



4. Release the sprocket units by pulling the sprocket locks forward.

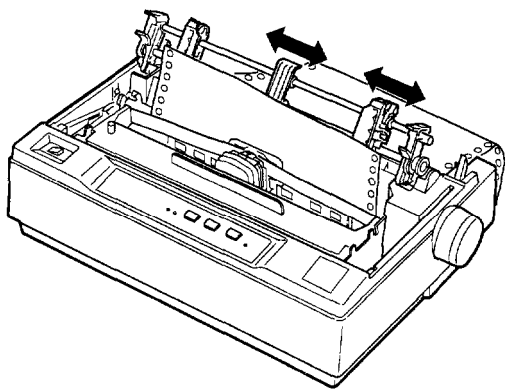


5. Insert the paper into the paper slot as shown below and pull it up. Position the paper using the scale on the printer as a guide. The printer prints to the right of the position marked 0.

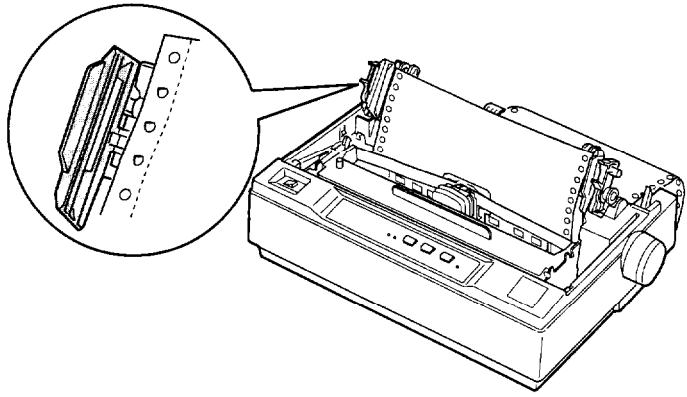


Note:
Make sure your paper supply is positioned within 1 meter (3 feet) of the printer.

6. Slide the left sprocket unit so that its sprockets match the position of the holes in the paper and lock the unit in place. Then slide the right sprocket unit to match the width of your paper, but do not lock it. Move the paper support midway between the two sprocket units.



7. Make sure your paper has a clean, straight leading edge. Open the sprocket covers. Fit the first holes of the paper over the sprocket pins and then close the sprocket covers. Slide the right sprocket unit to remove any slack in the paper and lock it in place.



8. To separate the incoming paper from the printed paper, attach the paper guide. Hold it horizontally and fit its notches over the printer's mounting posts. Then slide the paper guide toward the back of the printer until you feel it click.

9. Slide the left edge guide to the center until it stops at the diamond-shaped guide mark; slide the right edge guide to the opposite guide mark.

10. Attach the printer cover and adjust the paper position with the knob. Turn the knob until the perforation between pages is just above the print head.

11. Make sure the printer cover is closed. Then turn on the printer. When the printer receives data, it begins printing automatically.

If you want to change the position where printing begins on the page, press LF/FF to advance the page to the next top-of-form position, and then follow the steps on page 2-5 to adjust the loading position.

To eject the paper, tear off the paper entering the printer; then press the LF/FF button to feed the paper forward.

Printing on Special Paper

In addition to printing on single sheets and continuous forms, your printer can also print on a wide variety of paper types, including multi-part forms, labels, and envelopes.

Before printing on special paper, you need to change the paper-thickness setting.

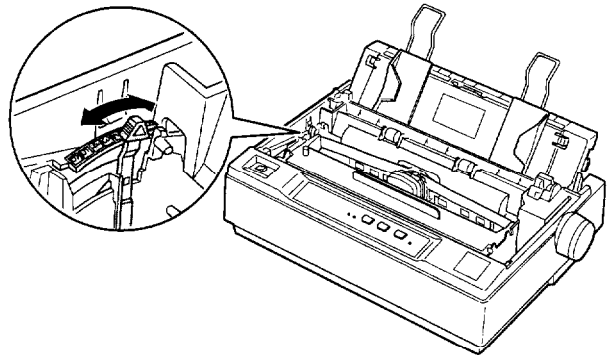
Caution:
When printing on multi-part forms, thicker-than-normal paper, labels, or envelopes, make sure your software program settings keep the printing entirely within the printable area. Printing past the edge of these papers can damage the print head.

For multi-part forms and labels, you should not print any closer than 13 mm (0.5 inch) from either edge of the paper. For information on the printable area of envelopes, see the Appendix.

Adjusting the paper-thickness lever

The paper-thickness lever lets you specify the correct setting for your printing material. It is factory-set for standard office paper. Here's how to change the setting for special papers:

1. Turn the printer off and open the cover. The paper-thickness lever is on the left side of the printer. The numbers next to the lever indicate the thickness setting. For normal use, the lever should always be set to position 0.



2. Use the table below to select the appropriate paper thickness.

Paper type		Lever position
(Reserved)		-1
Standard paper (single sheets or continuous)		0
Multi-part forms	2-sheet	1
	3-sheet	2
	4-sheet	3
Envelopes	20 lb	4
	24 lb	5
(Reserved)		6

3. Close the cover. When you finish printing, move the paper-thickness lever back to position 0.

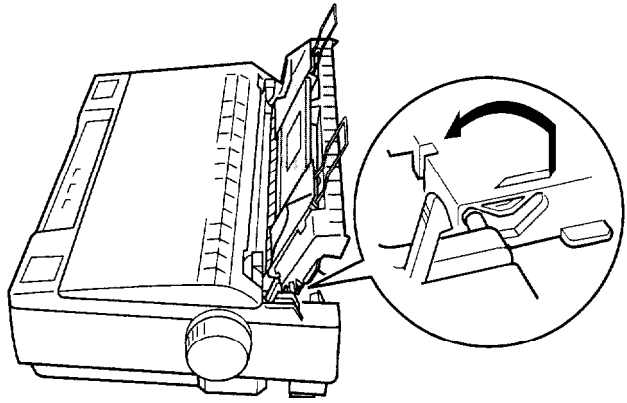
Note:
When you choose lever positions 2-6, the print speed is reduced.

Multi-part forms

You can use the built-in tractor to print on carbonless multi-part forms of up to four parts (one original plus three copies). Before you print on the forms, set the paper-thickness lever as described in the previous section. These tips will help you get good results:

- ❑ Load multi-part forms with the tractor only, not in the cut-sheet feeder or paper guide. For instructions, see "Printing on Continuous Paper" on page 2-7.
- ❑ Use only multi-part forms that are free of wrinkles and waves. Never load multi-part forms joined by metal staples, tape, or continuous gluing.
- ❑ If you need to adjust the loading position, use your software program or change the loading position as described on page 2-5.
- ❑ When you use multi-part forms, raise the paper guide as shown.

Note:
If you print on multi-part form without raising the paper guide, the paper may jam.



labels

You must use the tractor as a pull tractor to print on labels. Keep these tips in mind:

- ❑ Choose labels mounted on a continuous backing sheet with sprocket holes made for use with a tractor. Do not print labels as single sheets, because the shiny backing sheet almost always slips a little.

- ❑ You load labels the same way you load continuous paper, except that the paper-thickness lever should be set to 1. See page 2-13 for loading instructions.

- ❑ Because labels are especially sensitive to temperature and humidity, use them only under normal operating conditions.

- ❑ Make sure the printing stays entirely within the printable area. (See the Appendix for specifications.)

- ❑ Do not leave labels loaded in the printer between jobs; they curl around the platen and may jam when you resume printing.

- ❑ To remove the labels from the printer, tear off the fresh supply at the rear of the printer; then press LF/FF to advance the remaining labels out of the printer.

Caution:

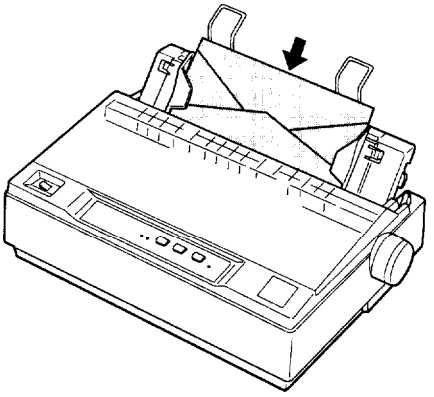
Never feed labels backward through the printer; they can easily peel off the backing and jam the printer. If a label does become stuck in the printer, contact your dealer.

Envelopes

You can feed envelopes individually using the paper guide.

- ❑ Before loading an envelope, set the paper-thickness lever to position 4 or 5. See page 2-18.

- ❑ To load an envelope, follow the steps used to load single sheets in "Running the Self Test" on page 1-10. Insert the wide edge of the envelope into the printer first, printable-side down. When you insert the envelope between the paper guides, push it firmly and hold it until it feeds into the printer.



- ❑ Use envelopes only under normal temperature and humidity conditions.

- ❑ Make sure the printing stays entirely within the printable area. The print head must not go past the left or right edge of the envelope or other thick paper. (See the Appendix for specifications.) It's a good idea to print a test sample using a normal single sheet of paper before you print on the envelopes.

Using the Printer Setting Mode

Your printer has internal settings that control simple functions such as the page length and character set. These settings take effect each time you turn on the printer, so they are also called default settings.

For most users, the factory settings are best, but you can change these settings if necessary. The table below lists all the settings you can change.

Function	Options
Character table*	PC437, PC850, PC860, PC863, PC865, PC861, BRASCII, Abicomp
Page length	11, 12, 8.5, 70/6 inches
Skip-over-perforation	On, Off
Auto tear off	On, Off
Graphic print direction	Unidirectional, Bidirectional
Software	ESC/P 2, IBM X24E
AGM	On, Off
Auto line feed	On, Off
Interface	Auto (10 sec. wait), Auto (30 sec. wait), Parallel, Serial
Bit rate	300, 600, 1200, 2400, 4800, 9600, 19200 bps
Parity bit	None, Odd, Even
Data length	7 bit, 8 bit
EXT/ACK	Disable, Enable
State reply	On, Off

* In certain areas, the following character tables are available:
PC437. PC850, PC864, PC437 Greek, PC852, PC853, PC855, PC857, PC866, PC869, IS0 Latin IT, IS0 8859-7, Code MJK, MAZOWIA, Bulgaria

Note:
Because software settings always override the printer's default settings, use your software program to control the printer, if possible. See your software documentation for more information.

Printer setting descriptions

This section describes all the settings available in the Printer Setting mode.

Character table

Character tables contain the characters and symbols used in different languages. Your printer includes a wide variety of character tables. See the Appendix for specific characters.

Page length

This option is available only when you use continuous paper with the tractor. You can set the page length to 8 1/2, 11, 12, or 70/6 (the length of A4 paper) inches.

Skip-over-perforation

When you turn on this feature, the printer skips over the perforations of continuous paper, providing a 1-inch margin between the last line printed on one page and the first line printed on the next. Because most software programs set their own top and bottom margins, you should use this feature only if your program does not provide them. This feature does not affect single-sheet paper.

Auto tear off

When you use continuous paper with the push tractor, this feature advances the paper perforation to the tear-off position where you can easily tear off the printed pages. When the printer receives data, it automatically reverses the paper to the top-of-form position and starts printing, so you can use all of the next sheet. When you use the tractor to print on labels, set this feature to Off.

Graphic print direction

You can choose unidirectional or bidirectional as the print direction for graphics. The printer usually prints text bidirectionally for fast printing and prints graphics unidirectionally for precise vertical alignment of print dots. To print graphics faster, select bidirectional printing.

Software

You can select the kind of printer commands used by your printer.

When you select ESC/P 2™, the printer emulates an EPSON ESC / P 2 printer. When you select IBM X24E, the printer operates as an IBM Proprinter™ X24E. If possible, choose an EPSON ESC/ P 2 printer in your software programs. This will allow you to use the most advanced font and graphics handling available. (Emulation means that the printer can understand and respond to commands as if it were an X24E.)

AGM (Alternate Graphics Mode)

When A.GM is set to On, the printer can use high-resolution 24-pin graphics commands. The default setting is off. When you select IBM X24E, this setting is available.

Auto line feed

When the auto line feed feature is on, each carriage return (CR) code is accompanied by a line feed (LF) code. If your printed text is unexpectedly double-spaced, set this feature to Off. If text lines print on top of each other, set it to On.